In The Claims:

1. (Currently Amended) A method for coherent phase synchronous [[CDMA]] code division multiple access (CDMA) communications between a gateway and multiple subscribers via multiple transponder platforms comprising the step of synchronizing a local reference clock for each subscriber in a service area to a single master reference clock for multiple transponder platforms wherein the distance separating the transponder platforms is constrained to a range wherein the local reference clocks for all subscribers have substantially the same phase with respect to the master reference clock.

2. (Original) The method of claim 1 further including the step of transmitting forward link CDMA signals from the gateway to an intended subscriber via each transponder platform.

3. (Original) The method of claim 2 further including the step of receiving return link CDMA signals at the gateway from the intended subscriber via each transponder platform.

4. (Original) The method of claim 3 further including the step of calculating message signal propagation parameters from the return link CDMA signals.

5. (Original) The method of claim 4 wherein the step of calculating message signal propagation parameters includes calculating a time delay between the time a message signal is transmitted from the gateway and the time the message signal is received by the intended subscriber.

6. (Original) The method of claim 4 wherein the step of calculating message signal propagation parameters includes calculating a frequency shift of the message signal relative to the intended subscriber.

7. (Original) The method of claim 4 wherein the step of calculating message signal propagation parameters includes calculating a phase shift of the message signal relative to the intended subscriber.

8. (Original) The method of claim 4 further including the step of calculating respective delays for the intended subscriber via each transponder platform from the calculated propagation parameters.

9. (Original) The method of claim 8 further including the step of transmitting a delayed synchronous CDMA message signal from the gateway to the intended subscriber via each transponder platform according to the respective delays so that the delayed message signals arrive substantially in phase at the intended subscriber.

10. (Original) The method of claim 1 wherein message signals arrive at an unintended subscriber from each transponder platform having the same clock phase and not the same carrier phase.

11. (Original) The method of claim 1 further comprising the step of constraining the distance separating the transponder platforms for synchronous CDMA communications substantially according to

$$d \leq \frac{\Delta}{\sin\theta}$$

where d is the separation between transponder platforms, θ is the angle of the subscriber from a transponder platform nadir, and Δ is given approximately by

$$\Delta \approx 0.1 \frac{c}{chip\ rate}$$

where c is the speed of light.

12. (Curently Amended) An apparatus for coherent phase synchronous [[CDMA]] code division multiple access (CDMA) communications between a gateway and multiple subscribers via multiple transponder platforms comprising:

a transmitter for transmitting forward link CDMA signals and a delayed synchronous CDMA message signal from a gateway to an intended subscriber via each transponder platform;

a receiver for receiving return link CDMA signals at the gateway from the intended subscriber via each transponder platform;

a propagation parameter calculator for calculating message signal propagation parameters from the return link CDMA signals;

and a reference clock synchronizer for synchronizing a local reference clock of each subscriber to a master reference clock of the gateway from the calculated propagation parameters wherein the local reference clocks of all subscribers have substantially the same phase.

13. (Original) The apparatus of claim 12 wherein the propagation parameter calculator calculates a time delay between the time a message signal is transmitted from the gateway and the time the message signal is received by the intended subscriber.

14. (Original) The apparatus of claim 12 wherein the propagation parameter calculator calculates a frequency shift of the message signal relative to the intended subscriber.

15. (Original) The apparatus of claim 12 wherein the propagation parameter calculator calculates a phase shift of the message signal relative to the intended subscriber.

16. (Original) The apparatus of claim 12 further comprising a delay calculator for calculating a respective delay for the intended subscriber via each transponder platform from the calculated propagation parameters.

17. (Original) The apparatus of claim 16 wherein the delayed synchronous CDMA message signal is transmitted from the gateway to the intended subscriber via each transponder platform according to the respective delays so that the respectively delayed message signals arrive substantially in carrier phase at the intended subscriber.

18. (Original) The apparatus of claim 12 wherein the delayed message signals from the transponder platforms arrive at an unintended subscriber having the same clock phase and not the same carrier phase.

19. (Original) The apparatus of claim 12 wherein the distance separating the transponder platforms is constrained for synchronous CDMA communications substantially according to

$$d \leq \frac{\Delta}{\sin\theta}$$

where d is the separation between transponder platforms, θ is the angle of the subscriber from a transponder platform nadir, and Δ is given approximately by

$$\Delta \approx 0.1 \frac{c}{chip\ rate}$$

where c is the speed of light.